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# THE QUANTITATIVE STUDY OF THE LABOR MOVEMENT

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The United States has taken an enviable position among the nations of the world in the field of labor statistics. It has set others an example in the establishment of separate bureaus for the collection of such statistics, and it is particularly rich in statistics of strikes and lockouts. Our observations on these subjects cover a continuous period of twenty years from 1881 to 1900, and it is planned to continue the series and publish additional tables from time to time. No other country has so long a series of statistics on this subject collected in a uniform manner. Yet it must be confessed that these publications still leave something to be desired, and I shall endeavor briefly to point out two particulars in which they might, in my judgment, be made much more effective than they are.

Strike statistics are not published as light reading. They must be intended to give us a clearer insight into the labor movement than can be gained by casual observation, by reading the newspapers, or even by reading the utterances of the organs of trade unions or employers' associations. And the most important questions which they may be reasonably expected to answer must be First, what is the general tendency of these disturbances, are they increasing or diminishing, and, if they fluctuate from time to time, do their fluctuations bear any relation to other economic phenomena, especially the prosperity of business, prices, wages, unemployment, etc.? Secondly, what can we learn of

their causes or motives? For without this knowledge we can at best establish concomitant variations, we cannot convincingly say why these disturbances follow or precede certain other phenomena. Now the Bureau of Labor publishes very full statistics on both of these topics, and yet they do not give one who endeavors to study them carefully any very satisfactory answer to either question. The reason is that there seems to be no one index by which the magnitude of labor disturbances can be gaged, and no such grouping of causes as to give the reader a clear conception of what they mean. I shall, therefore, consider first the general measurement of labor disturbances, and secondly the analysis and grouping of causes.

In the sixteenth annual report of the Department of Labor in Washington, there appear to be four distinct modes by which the severity of labor disturbances may be measured: (1) the number of strikes and lockouts; (2) the number of establishments concerned; (3) the number of employees involved; (4) the pecuniary loss, either to employees through lack of wages, or to employers through lack of business. Which, if any, of these four standards is the best?

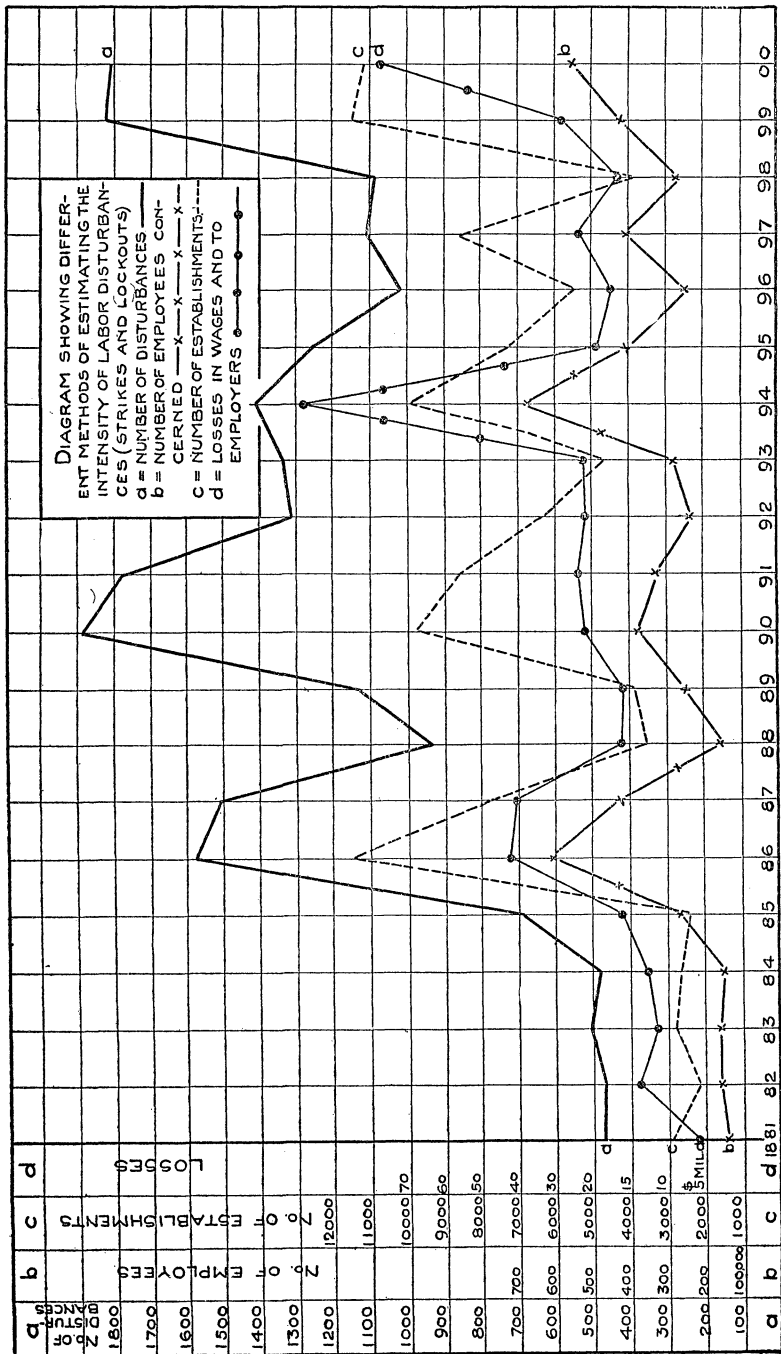
(1) To count merely the number of strikes and lockouts is obviously to look only at the surface. It is as if we were to measure the progress of railroading in our country by counting the number of railroad companies at different times; or to measure the severity of a war by counting the number of battles. It may be claimed that no harm comes from this method, since big and small strikes are apt to occur mixed, and that the change from year to year will indicate the real change in the severity of the disturbance; but in point

of fact the mere number of disturbances must tend to fall in proportion to their importance as labor organizations increase their amalgamating powers and embrace a larger number of establishments and of workers in one movement.

(2) To count the establishments would seem to give us a better view of the situation; but here again, as capital tends to be concentrated, the number of establishments involved might grow less, even though the number of strikers might grow larger.

(3) To count the number of employees concerned would, therefore, seem to be still better, whether we regard the disturbance from the point of view of its causes or of its effects. If we look at the causes, the movement of a large number of men, whether in one or many establishments, would indicate a more general and serious cause than that of a small number, while the consequence in loss of wages and stoppage of trade would also be greater. And yet this measure, too, is faulty, in that it takes no account of time. A strike of a thousand men would seem more important than that of a hundred, but if the former only lasts one day and the latter one hundred days, it would certainly count for much less in its effects upon business.

(4) To take the loss of wages seems still better, inasmuch as this involves both the element of men and of time. But it would tend to give more weight to strikes among the better paid workers, whereas, a strike of people earning small wages is apt to be more significant than a strike of those earning high wages, because carried on under greater difficulties, and, therefore, implying a more acute cause as well as more acute suffering. While all four of these methods are used in the general summaries of strikes, when the report comes



to the important matter of causes, it takes the establishment as its unit. This is certainly better than taking the strike, and yet, as shown above, it is not perfect.

If we now turn from this general consideration to the actual results as returned by the Bureau, we find, by plotting the strike statistics measured according to the four standards, certain general similarities, but also some differences which are important. These are shown in the diagram on page 163.

(1) Looking merely at the number of strikes and lockouts, and taking the period of twenty years from 1881 to 1900, we find five maximum points in the curve. Of these the two greatest, and they are about equal, occurred in 1890 and in 1899-1900, that is in years of general prosperity. But there is also a large upward turn for the years 1886 to 1887, which were years following a depression; and there were less important upward movements in 1894 and 1897.

(2) If we look at the number of establishments, we find again five upward movements, but they are nearly equal. The greatest is for the years 1899-1900; the next for the year 1886, but the years 1890, 1894 and 1897 show an almost equal altitude.

(3) If we look at the number of employees out of work, we again find five maximum points, 1886, 1890, 1894, 1897, and 1900; but here the relative situation is inverted as compared with the line showing the number of strikes, for the two highest points are in 1886 and 1894, in other words, in years following a depression. The next highest point is in 1900, while the two smaller apexes are found in 1890 and 1897.

(4) If we now look at the curve showing the losses by strikes and lockouts, the figures being obtained by adding together the loss of wages to employees and the

general losses estimated for the employers, we reach a still different result. We have here, as before, five maximum points, but of these that of the year 1891 is insignificant, as is likewise the one for 1897. The three high peaks are in 1886-1887, 1894, and 1900. Thus, as we proceed from one mode of measurement to another, we find that, excepting for the years 1899 and 1900, the peaks in years of prosperity tend to grow smaller, and those in years of adversity larger. Thus it turns out to be of considerable importance whether we take one mode of measurement or another. While, therefore, we find a certain agreement between the different curves in respect to the years of maximum, we find considerable differences, when we compare the magnitudes of those maxima themselves; so that those figures, while they confirm each other to a certain extent, do not in themselves enable us to answer the question, whether strikes are to be taken as a phenomenon of good times or of bad times.

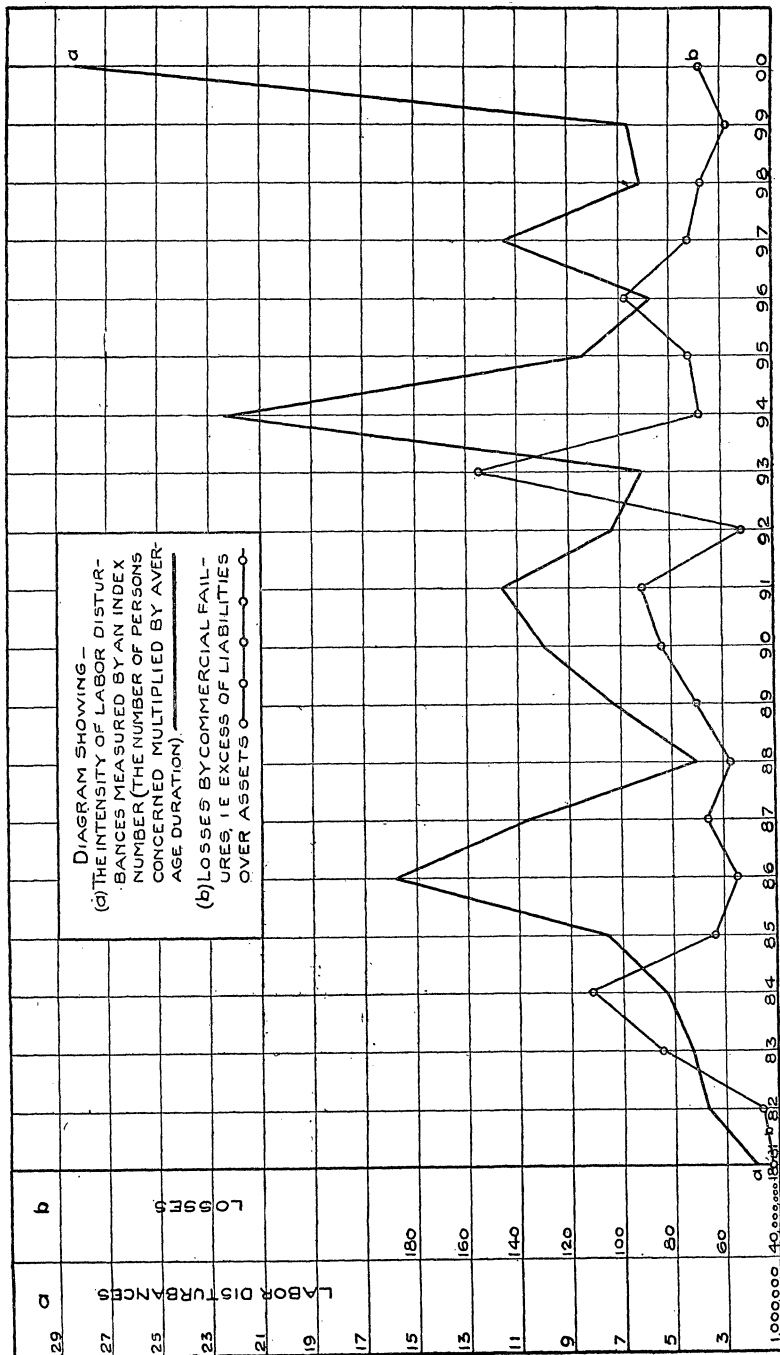
It would seem as if none of the figures used by the Bureau were altogether satisfactory. What we should really like to get at would be the number of days lost. In other words, if we could multiply the number of men striking by the duration of each strike, and add the products together, we should get a figure showing the number of days sacrificed. This would indicate both the importance of the cause, since it would show approximately the greatness of the sacrifice made by the strikers, and it would also show approximately the immediate consequences in the same way. Inasmuch as these figures are not given, we may create an artificial index number (which will not indicate any single fact, but will at least combine two important factors) by multiplying the number of strikers by the average

duration of strikes, the number locked out by the length of lockouts, and adding the products. If the strikers were evenly distributed among the different categories of strikes when classified by duration, this would be the figure sought for, *i.e.*, the total time lost. But it is, of course, possible that the larger strikes in a given year may have an average short duration and the smaller strikes an average long duration, so that the figures will be unduly swollen. And yet the general result may be assumed to be not far from accurate.

The reasons for measuring strikes by the number of days lost, or, failing that, by an index number which will give approximately the same result, may be thus summarized :

We have a constant standard based upon a permanent factor. If we take the number of strikes, the figures tend to shrink with the perfection of organization of labor. If we take the number of establishments, they vary with the organization of industry, tending to decrease as industry becomes more concentrated. If we measure loss of wages, we have a gage which varies with changes in the compensation of labor, while if we take simply the number of employees, we leave out of account altogether the important element of time. The loss of time is also the most significant single factor, whether we consider it as an index of the feelings which have given rise to the strike, or as an index of the sacrifice which the strike entails upon the strikers. As an additional presumption in favor of this index number it may be mentioned that the French labor bureau publishes the loss of days year by year, and that the English *Labor Gazette* has said in reference to different methods of measuring labor disputes: "The best statistical comparison is, however, the aggregate





duration, that is, duration in working days multiplied by numbers of work people involved." (*Labor Gazette*, Jan. 1903, p. 3).

The importance of agreeing upon and carrying out systematically a uniform index number is evident, when we try to trace the connection between labor disturbances and general prosperity. The Bureau of Labor has generally been very cautious in drawing inferences from the figures which it publishes. Its only approach to an expression of opinion on this particular question is found in a sentence in the introduction to the sixteenth annual report (p. 16), in which we are told that during the last eleven years the strikes were most numerous in the years 1890-1891 and 1899 and 1900, both of which were years of prosperity. President Hadley, on the other hand, in his "Economics" says that strikes usually occur after a commercial crisis "(Economics p. 299)." Mr. Theodore E. Burton in his work on commercial crises mentions strikes only incidentally, where he treats them as one of the preceding phenomena, but though he goes into great detail regarding other phenomena, such as imports and exports, consumption, statistics of failures and of unemployment, he makes no special reference to strikes or strike statistics.

Now the interpretation that we give to the strike statistics will depend upon which set of them we use. If we look simply at the number of strikes and lockouts, the figures would indicate that they are peculiarly characteristic of periods of prosperity. If we look at the losses, we get a different view, for the maxima occur in periods following commercial crises, excepting in 1900. The index number which I have adopted shows the same general result. The interpretation

which I am inclined to put upon these figures is the following: Strikes are the friction which goes with any process of readjustment. They are, therefore, liable to occur during the readjustment following bad times as well as during the readjustment which comes with rising prices and prosperity. Our index number seems to show that the friction is more intense during the readjustment following bad times than in the other case, though the large figures for 1900 must caution us against hasty generalizations. (See diagram on page 167.)

The study of the causes of strikes is vastly more difficult than their enumeration. Indeed, we may question at the outset whether it is quite accurate to use the expression "cause" to describe the various considerations which lead to a strike or a lockout. I do not desire to raise purely logical questions in this place, but I think it will be clear to almost any one that, when we speak of higher wages, shorter hours, etc., as the causes of strikes we really have in mind the motive, that is, that consideration, whether lying in the past or in the future, which determines the mind of the striker. But passing by this formal question, the enumeration of motives, or causes is extremely difficult, partly on account of the fact that in many strikes two or more are combined. The enumeration of causes and combinations of causes in the sixteenth annual report of the Commissioner of Labor for the year 1900 alone includes some 357 different rubrics.

Besides the difficulty arising from large numbers, which put us in danger of not seeing the forest on account of the trees, we have the further difficulty lying in the original investigation of separating the real cause from the apparent cause—the immediate from the

remote. On its face a strike may turn upon a question of wages, when in fact it turns on a question of trade union control. Or again the immediate cause may seem to be the discharge of a workman, when in fact this is but the occasion which brings into play impulses that have long been smouldering. These difficulties should, however, not deter us from studying the motives of strikes. They should only caution us to be careful in their use. Let us first see whether some grouping of motives could not be done by which the figures would be simplified, and the motives could be brought into connection year by year with other phenomena.

A careful study of the large number of assigned causes will show us that we can group them pretty easily, either according to the subject matter involved in the controversy, or according to the attitude of the parties. If we look first at the subject matter, we shall see that there are three leading interests, one of which is involved in almost every strike of importance :

(a) We have economic interests, which probably lie at the basis of more than half of the strikes and lock-outs, such as those involved in questions of wages, of hours, holidays, overtime, and sundry privileges.

(b) Many other strikes turn upon a question of power. We may speak of the motive in general as being social in its nature, though this term is not quite exact. In that group we should put the strikes and lockouts involving the recognition of the union, the discharge of non-union employees or of an unpopular foreman, and above all the sympathetic or secondary strike, waged not to gain direct advantages for the strikers, but to help others and thus increase the power and influence of organization.

(c) A third class, but less numerous than the first

two, includes strikes which arise out of a misunderstanding regarding new machinery or new methods of work. We might call these strikes for technical reasons, though again the term requires a little explanation to be understood. It often happens that an employer introduces some new labor-saving device or some new article, and fixes a schedule of piece-wages which he thinks, or claims to think, will leave the earnings of the operatives about where they were. The operatives are suspicious of the change. They believe they will either earn less, or have to work harder, or that the demand for employment will be lessened, or that in some other way the change is to their disadvantage. There may be no intention on the part of the employer to reduce earnings, or on the part of the workers to claim more.

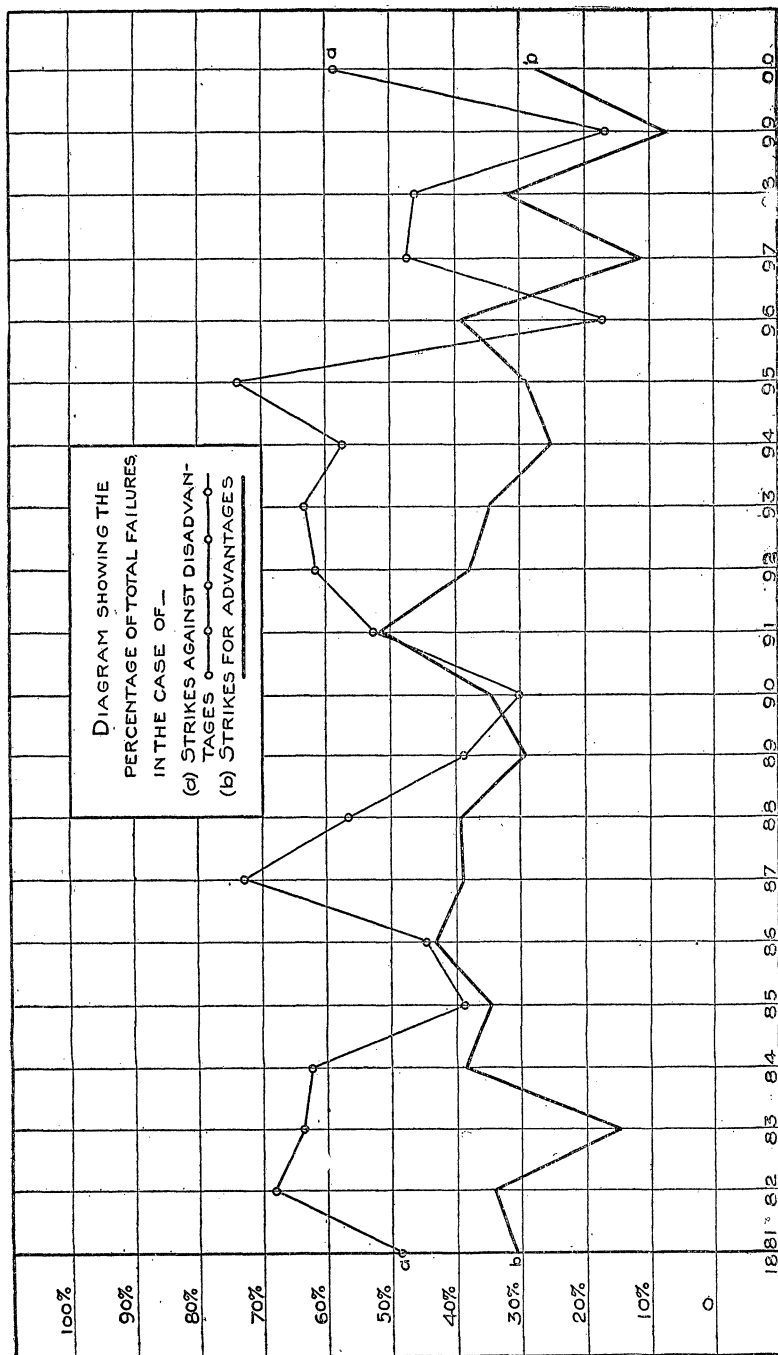
These three groups include all but a very small number of the disturbances.

Each of these three groups may again be subdivided according to the attitude of the parties, for in almost every case the strike occurs, either because the strikers desire to gain some positive advantage, economic, social or technical, or because they desire to resist an economy or some change or tendency which they think disadvantageous. The distinction in most cases runs parallel to that between offensive and defensive strikes, which is adopted by the German socialist unions in their statistics. Of course, as in war, one party may in form take the offensive, when in fact he is on the defensive. It would, therefore, not be safe to assume from the fact that a strike was recorded as having been undertaken for higher wages that it was not waged in resistance to some other measure such as the lengthening of hours or the cutting off of privileges. To the investigator, however, who examines into the circum-

stances on the spot, it is believed that the real character of a strike would in the majority of cases be evident.

The same analysis that is applied to strikes should be applied to lockouts, but, of course, with a converse meaning. The lockout and the strike are very similar. They differ simply in the fact that in one case the employer takes the initiative, in the other the employee. In some cases the employee may hold that he is virtually locked out, though the incident may look to others like a strike. A lockout, arising because the employees make demands which the employer is unwilling to concede would fall in the same category as a strike undertaken under the same conditions. As a lockout it would be defensive, as a strike offensive. Both would indicate the same thing with regard to the economic or social environment.

If the Bureau of Labor could, in addition to the detailed figures which it now publishes, secure figures showing the classification of strikes according to the grouping outlined, some important questions might find an answer which it is very difficult for us to settle on the basis of our present figures. It would, for instance, be interesting to know whether the increase in the number of strikes is due mainly to economic questions, or to social questions, that is, whether they represent simply the adjustment to changes in prices, cost of production, etc., or a desire for a change in the control of the conditions of labor. It would also be very interesting to ascertain the chances of success of the various kinds of strikes, and this would have a practical effect, because the trade union leaders would doubtless try to avoid those strikes which are least likely to succeed, and a good deal of futile friction might thus be dispensed with. Thus the gradual disappearance of the sympathetic strike is



due to the discovery that this kind of strike is much less likely to succeed than strikes in general. To express the same idea in figures, the sympathetic strike failed during the twenty-year period under consideration in 72 % of all the establishments involved.

I have made an attempt to analyze the strike figures according to one of the criteria which I have laid down, *i. e.*, according to the attitude of the parties, and to make a distinction between strikes undertaken to procure a positive advantage on the part of the men, and those undertaken to resist an effort at economy on the part of the employers. I confess that, as the grouping was based simply upon the published figures, there were a number of strikes which it was impossible to classify with absolute confidence. And yet these strikes form so small a fraction of the total number that the errors are probably not serious enough to vitiate the general complexion of the results. Leaving out of account the sympathetic strike, the figures show that, of the total number of strikes, those against economies failed in 49 %, and were either wholly or partially successful in about 51 %, while the strikes for positive advantages were wholly successful in 55 %, and were either wholly or partially successful in 71 %. But while on the whole a strike against economies was more likely to fail than a strike for positive advantages, the chances of success or failure varied very much from year to year. Thus we find that the strikes against economies were especially disastrous in the years of commercial crises, for while 49 % of all such strikes failed in the whole twenty years, in the year 1884 63 % resulted in failure and in the year 1893 64 %. On the other hand, in the year 1899, when the condition of the country was on the whole prosperous, only 18 % of



these strikes failed completely. These variations are visualized on page 173.

Many other examples could be given to show the kind of application of which the strike statistics would be capable, if it were possible to get an analysis of them which would bring them into direct relation to economic forces.